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# Navy and Marine Corp industrial activities: a guide for the comptroller

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Monterey, California. Naval Postgraduate School

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Navy and Marine Corp Industrial Activities  
A Guide For The Comptroller

by

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Submitted in partial fulfillment  
of the requirements for the degree of

MASTER OF SCIENCE IN FINANCIAL MANAGEMENT

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June 1992

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## **ABSTRACT**

The focus of this thesis is to identify the prerequisite knowledge required by the Navy and Marine Corps financial manager in the area of industrial fund activities. Research at the headquarters and field activity levels has provided practical policies and procedures that have been combined with existing financial management directives, manuals and instructions to produce a management guide for incorporation in the Practical Comptrollership Course (PCC) and Financial Management in the Armed Forces Course offered by the Naval Postgraduate School in Monterey, California. It is primarily intended for use by these students as a management tool for job turnover, reference, and training.

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## I. INTRODUCTION

### A. BACKGROUND

In today's financially constrained environment, it is critical that Navy and Marine Corps managers control costs as effectively as possible. With a large share of Navy funds going to support industrial operations, managers should be interested in the efficiency of these activities because they have a direct effect on the Navy's budget.

Training for financial managers with regard to industrial fund activities is available at the Naval Postgraduate School through the Practical Comptrollership Course and the Financial Management in the Armed Forces Course (MN 3154). The reference materials for these courses are currently under revision in order to include significant changes in financial management practices such as the incorporation of the former Navy Industrial Fund (NIF) into the Department of Defense consolidated Defense Business Operations Fund (DBOF).

In light of the increased emphasis on consolidation initiatives under DBOF, it is important that financial managers understand its charter and purpose. As more and more activities convert under DBOF, business encounters for financial managers at the local level will increase.

It is the intent of this thesis to merge industrial fund concepts, DBOF initiatives and field level experiences into a practical guide for the financial manager.

## **B. OBJECTIVE**

The objective of this thesis is to develop a comprehensive industrial fund activities guide for use by the field activity comptroller department. This management guide will be incorporated as a training module in the Practical Comptrollership Course (PCC) and Financial Management in the Armed Forces Course offered by the Naval Postgraduate School in Monterey, California. It is primarily intended for use by these students as a management tool in the relieving process, initial reference, and for command training.

## **C. RESEARCH QUESTIONS**

The primary research question is:

1. What is the prerequisite knowledge required by a financial manager to effectively understand the concept of industrial activity operations and become familiar with their operations under the new Defense Business Operations Fund (DBOF)?

Subsidiary research questions include:

2. What is the concept of a revolving fund?
3. What constitutes an industrial activity?

4. How and when does an activity receive approval to operate as a DBOF activity?

5. What are the advantages and disadvantages of service by an industrial activity?

6. What do industrial operations mean to an operating activity manager?

7. How can industrial funded activities be motivated to be efficient?

8. What are the costs of an industrial activity?

9. How are customers charged by an industrial activity?

10. What is the concept of rate stabilization and how does it work in an industrial activity?

11. What are some lessons learned and critical aspects for doing business with an industrial activity?

12. What are some future expectations for industrial activity operations under DBOF?

#### **D. DISCUSSION**

Reduced budgets are a reality throughout DoD. For financial managers, the challenges and opportunities to pursue cost-saving alternatives become unavoidable. Since industrial activity services are a target for such possible cost-saving alternatives, it is imperative that financial managers understand how these activities operate and transfer costs to customers.

Concurrent with an increased emphasis on DBOF issues, in particular, the consolidation of industrial fund activities, it is equally important that financial managers understand its purpose and intent. As more and more activities come under DBOF, this understanding becomes important to establish the proper buyer-seller relationship.

It is my intent to merge industrial fund concepts, DBOF initiatives and field level experiences into a practical guide for the financial manager. The Practical Comptrollership Course, Industrial Activities module will be provided as an appendix to the thesis. It is intended to replace the current Navy Industrial Fund module and augment the MN-3154 course.

#### **E. SCOPE AND LIMITATIONS OF STUDY**

This thesis will focus on industrial fund activities within the Department of the Navy. Because of the recent consolidation of the former Navy Industrial Fund (NIF) into the Defense Business Operations Funds (DBOF), a significant amount of discussion will be devoted to this area. Specifically, policy and procedural changes which have resulted from consolidation will be highlighted.

It is not the intent of this thesis to reiterate existing instructions. However, instructions will play an important role in the development of this user guide. The references for these instructions will assist the users of this manual in locating sources for additional research and for updating

their guide. Likewise, it is envisioned that follow-on research to this thesis will be ongoing until the time DBOF becomes fully implemented. The current time estimate for full implementation of DBOF is two to three years.

Concurrently, a great amount of emphasis will be placed on current practices and relations between field activity comptroller and industrial activities. The intent is to provide the financial manager with a practical guide to understanding how industrial fund activities operate. At times this will entail contrasting written policy and procedures against real world practices.

#### **F. METHODOLOGY**

Research data will be obtained from professional materials, articles, previous theses, and personal interviews. Research will be obtained from various local industrial activity organizations, comptroller offices and headquarters personnel. Most research will be conducted through personal interviews by telephone or during on-site visits.

My intentions are to interview personnel from the following organizations: NAVCOMPT, OSD, Defense Finance and Accounting Service (DFAS), NPS Comptroller Office, various Naval Air Stations, Naval Stations, audit agencies, and Industrial Fund activities.

## G. ORGANIZATION OF STUDY

A common thread will link the chapters from a user's standpoint; specifically each chapter will emphasize what industrial operations mean to an operating activity manager and how they can help the financial manager choose between cost-saving alternatives. Chapter II presents background information for the financial manager. Discussions will center around the comptroller organization and potential relations with industrial activities. A user's standpoint will be taken to set the tone for introducing subsequent material. This material will take shape in Chapter III as a practical user's guide. Likewise, it will serve as the Navy Industrial Activities module for the Practical Comptrollership Course condensed as an appendix to the thesis.

Chapters III through VI will be a user's guide for the comptroller for industrial activities. These chapters will contain the crux of material concerning industrial fund activities required as prerequisite knowledge for financial managers. It will be presented as a user's guide in the following lesson format:

### Overview

Lesson 1 - Introduction to the Navy Industrial Activities

Lesson 2 - The Industrial Accounting System

Lesson 3 - Customer Charges and Rate Stabilization

Lesson 4 - Critical Aspects for DBOF Activity Customers

## Lesson 5 - Industrial Activity Relations/Customer Service:

### Lessons Learned

Chapter VII will conclude the with some general observations about the progress made thus far in the organizational transition of all industrial activities under DBOF. Likewise, predictions for future changes and restructuring of industrial activities will be made.

## II. OVERVIEW

### A. DISCUSSION

Industrial activities are those activities engaged in producing goods or providing services, in response to requirements of users and central management organizations, that are common within and among Department of Defense (DoD) components. These types of activities are currently being consolidated by DoD into a centrally controlled fund known as the Defense Business Operations Fund (DBOF). The primary purpose of this consolidation effort is to lower costs, streamline the financial support functions and improve service to customers within DoD.

A major impetus behind the DBOF organization concept is the need to understand and implement unit costing throughout DoD. The reason is quite simple: DoD needs financial management systems that can provide better information for decision makers and more effective tools for managers. By realigning the cost of operations and capital investments with output in the financial management systems, DoD can provide the necessary visibility to the operating forces of what it costs to maintain them. Likewise, when doing business with an industrial activity, it is important for the financial manager to compare various cost saving alternatives. To do this, the

financial manager must understand how industrial activities operate and transfer costs to the customer. A detailed discussion on industrial fund organization and operations will follow in Chapter III as a practical guide for the financial manager.

## **B. NAVY INDUSTRIAL ACTIVITY**

A Navy Industrial Activity is an activity that uses a working capital fund to finance its operations. The working capital fund is maintained as a revolving fund.

The working capital fund concept began with the Hoover Commission Report of 1945 which emphasized the desirability of financing certain DoD operations. As a result of this report, Congress authorized a one-time appropriation establishing working capital funds comparable to those utilized in the private sector. These working capital funds finance DoD industrial and commercial type activities.

As a matter of historical perspective, the working capital fund concept for financing industrial and commercial type activities was established with special guidelines. The system was to incorporate an integrated management and accounting system and incorporate concepts from private industry. It was also designed to establish a buyer/seller relationship and achieve zero profit through stabilized rates. These rates are established in the President's budget and are charged off to the customer as appropriate. All DoD working

capital funds and their activity operations fall under the direct oversight of Congress. According to public law 216, section 405 of the 81st Congress, "working capital funds are authorized and provided for the financing of industrial-commercial type activities to effectively control and account for the cost of programs and work performed." [Ref. 3]

In summary, A Navy Industrial Activity permits operations in an efficient, business-like manner. It also serves as the basic tenet for establishing prices for customers and maintaining a budget by law for zero profit or loss. [Ref. 3]

#### **C. DEFENSE MANAGEMENT REPORT INITIATIVES**

In recent years, there has been an aggressive effort undertaken by the Department of Defense to streamline operations and consolidate resources. This effort is in reply to a 1989 Defense Management Report (DMR) to the President by the Secretary of Defense. To summarize this report, "it set forth a plan to implement the Packard Commission's recommendations, to improve the performance of the defense acquisition system and to manage more effectively the Department of Defense and its defense resources." [Ref. 7: p. 9]

Implementation of the DMR is an essential part of the DoD efforts to streamline and restructure the armed forces while maintaining defense capabilities within the limits of available resources. DMR initiatives have become increasingly

important due to reductions in defense spending as a result of changes in the world order associated with the collapse of the Soviet Union. Keeping this in mind, DoD has begun an extensive in-house cleaning initiative with the intent to save money and resources. According to an executive summary on DMR progress:

"DoD's leadership is committed to producing fundamental, long-lasting changes in the way the Pentagon does business. The DMR differs from other defense management studies in that the review was not conducted by an outside group of experts. It is the result of an extensive internal review of defense management practices and structures. The people-both civilian and military -who participated in the review are the same people who are now implementing its recommendations." [Ref. 7: p. 1]

The underlying philosophy guiding improvements within DoD's management is to centralize policies, procedures, standards and systems while decentralizing their execution and implementation. This philosophy has brought about major organizational changes throughout DoD. Concurrently DoD is reducing the cost of doing business by streamlining infrastructure, eliminating redundancy through consolidation and initiating common business practices.

As a result of the DMR and its implementation, a few specific initiatives for improvement areas include:

- establishment of a Corporate Information Management (CIM) system to increase information management
- consolidation of industrial-commercial activity capital working funds into the Defense Business Operations Fund (DBOF)
- consolidation of finance and accounting activities into the Defense Finance and Accounting Service (DFAS)

- consolidation of contract administration services within the Defense Contract Management Command under the Defense Logistics Agency
- consolidation of commissary operations into the Defense Commissary Agency
- drafting and forwarding of the Defense Management Improvement Act to Congress requesting legislative relief to facilitate efforts to improve defense management

Although these are just a few of the DMR initiatives underway, they illustrate that DoD is making huge fundamental changes in an effort to achieve efficiencies and cost-savings improvements. To understand the role DMR is having in DoD, a recent Defense Issue explains:

"The defense management report serves as a road map for a new way of doing business into the 1990s and beyond. The underlying philosophy has been to maintain or improve the quality of support while reducing costs by creating additional flexibility in the way we do business. The established DMR framework will facilitate ongoing and long-lasting management improvements within the department." [Ref. 7: p. 3]

The DMR is important because it is the impetus behind DBOF and unit-costing concepts. Keeping this in mind should make it easier to understand the changes taking place as a result of these new concepts.

#### **D. DEFENSE BUSINESS OPERATIONS FUND AND UNIT COSTING**

As mentioned previously, one of the major areas of improvement within DoD management is consolidation of like business functions into a centrally managed Defense Business Operations Fund which by design should provide DoD with greater purchasing power, less duplication and reduced cost.

But just as important, the DBOF concept together with unit costing principles is a major change in the way DoD does business. Although DBOF concepts are still being developed, the consolidation and reorganization efforts in DoD are in full motion. There is little doubt, that DBOF and unit costing are here to stay. Since all industrial fund activities have been consolidated under DBOF, it becomes important for financial managers to have a basic understanding of its purpose, intent and potential uses. The following sections will describe briefly DBOF and unit costing.

#### **1. Defense Business Operations Fund**

As a matter of doing business, the concepts of cost allocation and cost accounting are being completely revisited. Under the old system, costs were allocated against the activity that incurred them (provider). Under DBOF, these costs will be allocated against the activity that benefits (customer). Under the old system, real costs for weapons systems and maintaining operating forces were not available to decision makers. Under DBOF, concepts such as unit costing are being developed and tested to provide this information. This information will give managers a better idea of what it costs to produce goods and services. Some of the basic principles of DBOF include:

"Decisions on specifications and the level of performance required of a support organization (provider) should be made by the customer of the organization. All prices will include all costs: direct, indirect and overhead.

Differences in cost of the various levels of support should be reflected in prices charged to the customers. Provider activities must meet unit cost goals." [Ref. 2]

OSD serves as the controlling agency for DBOF related decisions and improvements.

## 2. Unit Costing

Unit costing is a management tool intended to accurately measure all the costs incurred at an activity or within a function related to the output of the activity. The cost of output will be determined by dividing total costs by the number of outputs. The total cost will include direct, indirect and administrative expenses associated with the output. [Ref. 2] The total cost concept provides an incentive to manage costs and facilitates improvement in efficiencies.

Currently, a DoD cost per unit output system is being developed and tested at a number of major functional commands. One of these commands is the Defense Finance and Accounting Service (DFAS). This organization was chartered in November 1990 as a result of consolidation efforts under DMR initiatives mentioned previously. It is interesting to note the correlation between DBOF and DFAS. The following list of DFAS areas of responsibility should provide an understanding for the big picture:

- Develop accounting and finance procedures to support DBOF financial policies
- Develop accounting and finance systems to support DBOF financial requirements

- Provide accounting, finance and reporting service to support DBOF
- Prepare departmental level DBOF reports and most agency level reports

One of the big advantages of the unit cost concept is that the budget automatically fluctuates with changes in work load which removes that uncertainty as a budget issue. [Ref. 2] It is not my intent to extend discussion of this topic into other financial management issues but merely to provide the financial manager a basis for understanding DBOF business practice changes as they affect industrial activities.

### 3. Summary

The major goal of DMR initiatives and DBOF concepts is to influence DoD managers and employees to provide the best support at the lowest cost and provide better information for decision makers. The following list of policies and principles serves as a good recap of the issues:

- Increased emphasis on business operations
- Focus on cost and performance in support of the customer
- Improved information
- A structure that supports the customer/provider relationship
- Customer rather than provider decides specifications and performance levels
- Differences in cost due to specifications and performance requirements should be reflected in prices
- Cost must be a factor in decisions at all levels

- All levels of management should have visibility of cost of doing business
- Providers must meet unit cost targets

Major changes in business practices within DoD will continue in an effort to improve service and reduce costs. The DoD Comptroller establishes DoD policy on DBOF operations. He issues policy applicable to financial management, budget preparation, accounting and reporting. Likewise, he authorizes and rescinds authorization of specific DBOF business areas or activities. [Ref. 3]

The remaining chapters of this thesis contain practical information on industrial activity operations and is formatted as module H for the Practical Comptrollership Course.

### III. NAVY AND MARINE CORPS INDUSTRIAL ACTIVITIES (MODULE H)

#### A. OVERVIEW

The intent of this module is to introduce the student to the operations of the Navy and Marine Corps industrial activities. These activities have always been financed by a revolving fund. There was a separate Navy Industrial Fund (NIF) until the inception of the Defense Business Operations Fund (DBOF), October 1991, at which time all industrial activities became part of the Defense Business Operations Fund.

For industrial activities the revolving fund finances their industrial and commercial type functions used to produce and furnish goods and services to other government entities on a reimbursable basis. In basic concept, a revolving fund commences operations with an initial funding by the Congress known as a corpus. This corpus serves as an initial capitalization for industrial activities. No new funds were required by Congress to establish the Defense Business Operations Fund because this new fund merely merged all existing activity funds. [Ref. 3]

Once given initial approval to operate as a DBOF activity, a Navy industrial activity can accept orders for work from DoN, other DoD, non-DoD federal government and non-federal

government customers. The activity performs the work with dollars from the revolving fund corpus, bills the customers for the work, and receives reimbursement from the customers (from their appropriated money). The reimbursement is intended to put the corpus of the revolving fund back to the level it started at.

Navy and Marine Corps industrial activities keep accounts much like a private business, except these activities budget to break even. Costs, both direct and indirect, are billed out to customers, and in theory, provide for reimbursement of the total operating costs incurred. When everything works right, the activity does not experience a profit or loss at the end of an accounting period. Cost accounts are kept which provide detailed records of both direct and indirect cost accumulations. Indirect costs are allocated to customers based on a predetermined rate which will be explained later in more detail. [Ref. 1: p. 1-31]

Industrial activities do a considerable amount of business each year; about 16 billion dollars annually in customer work. [Ref. 3] The majority of customer orders come from commands which are financed by Navy appropriations. With such a large share of Navy funds going to support industrial activities, Navy managers should be interested in the efficiency of their operations. Industrial fund operations have a direct effect on the Navy's budget because the less

effective the industrial activity, the higher the charge for services.

In proceeding through this material, the student should bear in mind what impact industrial operations have on an operating activity, and ask where can an industrial activity help the operating activity manager? Managers should consider the strengths and weaknesses associated with the various options for charging work done before doing business with an industrial activity. These options include: fixed price basis, cost reimbursable basis or stabilized rates. For example, with stabilized rates, rates for services and products are fixed for one entire year. The student should also ask how industrial fund activities can be motivated to be more efficient and thus more beneficial to its customers.

#### **B. LEARNING OBJECTIVES FOR MODULE H**

1. To understand the concept of industrial activity operations and become familiar with their operations under the Defense Business Operations Fund (DBOF).

2. To understand the advantages and disadvantages of service by an industrial activity.

3. To understand the concept of rate stabilization.

#### IV. LESSON I: INTRODUCTION TO THE NAVY INDUSTRIAL ACTIVITY

##### A. WORKING CAPITAL FUNDS

A working capital fund is a revolving fund used as a source of financing for work that will be paid for by the customer. There are a number of advantages for the use of a working capital fund:

- The establishment of a buyer-seller (contractual) relationship between activities. This relationship encourages cost consciousness and eliminates the concept of "free" supplies and services.
- Since the customer pays for the requested services, customers tend to limit their request to that which is actually needed.
- Duplication of comparable facilities is reduced through consolidation of similar activities.
- The mandatory cost accounting features make it possible to establish a "total cost per unit" for products and services. [Ref. 3]

Department of Defense Directive 7410.4, Regulations Governing Industrial Fund Operations, listed the following objectives of Industrial funds and they are all applicable to the Defense Business Operations Fund:

- Provide a more effective means for controlling the costs of goods and services...
- Create and recognize contractual relationships...
- Provide financial authority and flexibility required to procure and use manpower, materials and other resources effectively...

- Encourage more cross-servicing....
- Support the performance budget concept by facilitating budgeting and reporting for the costs of end products....  
[Ref. 10: p. 11]

The formation of the Defense Business Operations Fund clearly shows that as far as the Department of Defense (DoD) is concerned, industrial type accounting involves huge sums of money that can serve as a valuable management tool. The intent of DBOF is to provide for more effective management control of the industrial activity customers' funds and those of the industrial activity as well. [Ref. 3]

#### **B. DEPARTMENT OF DEFENSE INDUSTRIAL ACTIVITIES**

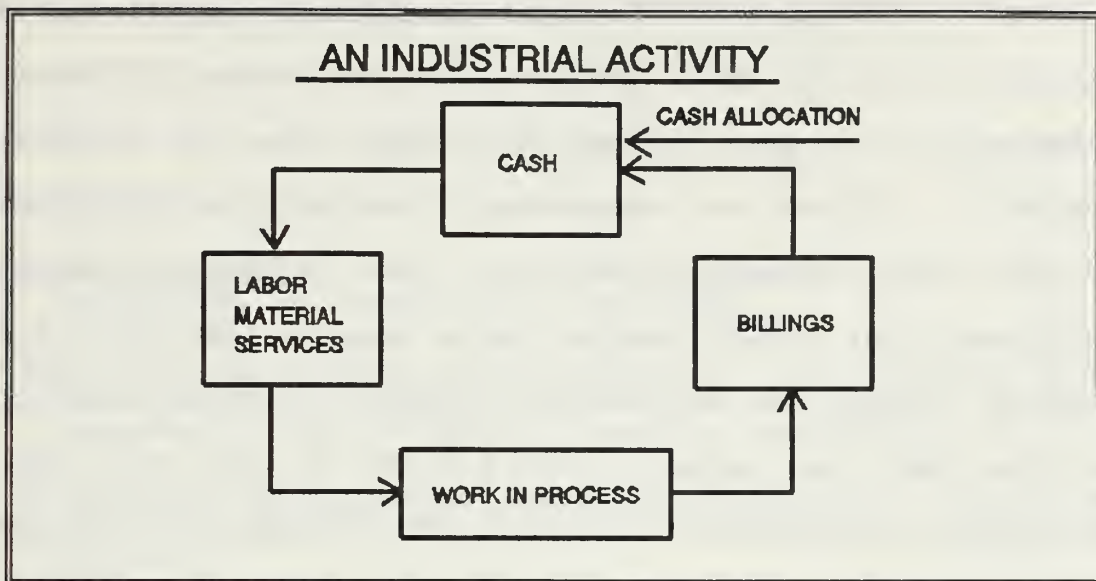
Prior to DBOF, each uniformed service had its own industrial fund. All of the following industrial funds are now part of the Defense Business Operations Fund:

- Army Industrial Activities - principally depot supply, maintenance, and transportation activities. The Military Traffic Management and Terminal Service (MTMTS) is the largest single Army Industrial type activity.
- Navy Industrial Activities - the largest of the DoD industrial groups. It includes the majority of Navy's depot maintenance facilities such as shipyards, air depots and ordnance facilities. Public works centers, research facilities, the Military Sealift Command (MSC), data automation centers and printing facilities are also Navy industrial activities.
- Marine Corps Industrial Activities - the smallest of the DoD industrial funds. It finances equipment maintenance depots and technical engineering support.

- Air Force Industrial Activities - includes depot maintenance of aircraft, laundry services, and the Military Airlift Command (MAC).
- Defense Industrial Activities - consists of the Defense Clothing and Textile Center and leased communications procured by the Defense Information Systems Agency.  
[Ref. 3]

### C. THE REVOLVING FUND CONCEPT

As discussed in the overview, industrial activities operate using the Defense Business Operations Fund. As such, these activities, after receiving a funded customer order, proceed to convert cash into service elements by financing the cost of personnel, material, contractual support and other support. These assets are then converted into a new (non-cash) asset which is called "Work-in-process" (WIP). On a repetitive cycle of at least once a month, these activities bill their respective customers (either by progress or final billings) and then reconvert the non-cash asset (WIP) back into cash. Since these billings are generally based upon "stabilized" rates for either level of effort expended or product produced, the activities tend to collect cash from their customers at a rate which varies slightly from the actual service output. As a result of this variant, industrial activities can temporarily make a profit or experience a loss. This cycle of converting cash to non-cash assets and back to cash is continuous for a revolving fund activity and is illustrated in Figure H-1. [Ref. 2: p. 5]



**FIGURE H-1**

#### **D. COMPOSITION OF THE NAVY INDUSTRIAL ACTIVITIES**

At the present time there are 52 different activities which comprise the Navy's Industrial Community. These activities are organized into activity groups (ie. all shipyards) and organizationally controlled by Activity Group Commanders (such as NAVSEA for shipyards). The Activity Group Commanders generally function as claimants/sub-claimants for the individual industrial activities under their cognizance and perform such duties as budget review and execution oversight. These Activity Group Commanders are responsible to the DoD and the CNO/NAVCOMPT for ongoing administration. The various Activity Groups and their respective claimants are listed in Figure H-2. [Ref. 3: p. 6]

Overall industrial financial management guidance is provided by the office of the Secretary of Defense (OSD) and is issued to the Navy through the Comptroller of the Navy (NAVCOMPT). OSD has the responsibility under Title 31 US code 1517 to avoid over-obligation of the Defense Business Operations Fund (DBOF) corpus as a whole. Section 1517 prohibits obligation of funds in excess of those available. The total DBOF cash balance should never be less than zero. Section 1517 constraints have not been delegated to either individual DBOF activities or Activity Group Commanders, however they are still responsible for maintaining all pertinent data by business function within each service component.

NAVCOMPT establishes accounting policies common to all Navy and Marine Corps industrial activities. These policies are maintained by the Defense Finance and Accounting Service (DFAS) and are published in the Navy Comptroller's Manual, Volume 5. [Ref. 3: p. 6]

#### **E. DOD/NAVCOMPT/ACTIVITY GROUP/ACTIVITY INTERFACE**

The principal interface between DOD, NAVCOMPT, Activity Groups and individual industrial activities exists within two major areas: budget development and budget execution. Industrial activity annual operating budgets are the basis for the Navy's portion of the DBOF annual OMB Circular A-11 budget submission. [Ref. 3: p. 7] The activity budgets are developed

in accordance with OSD guidance, as perpetuated in NAVCOMPT Manual, Volume 5 and NAVCOMPT NOTE 7111.

While the exact format may vary from year to year these operating budgets always include:

- Justification - a narrative explaining the factors considered in formulation the budget.
- Direct and overhead expense budgets - the estimated direct and indirect costs, classified by type of cost responsibility and type of service or product.
- Projected statement of financial condition - a projected "balance sheet" which lists assets, liabilities and capital.
- Projected statement of income and expenses - projected revenue, costs and expenses.
- Summaries - a (cash-flow) projection, as well as items of specific interest t OSD or the Activity Group manager.  
[Ref. 10: p. 10]

The individual activity electronically transmits its budget directly to NAVCOMPT into the Navy Industrial Fund Reporting System (NIFRS). NAVCOMPT operates the NIFRS and maintains a budget and execution data base for use by Activity Group managers and for NAVCOMPT evaluations, Department of the Navy (DoN) and OSD budget formulation and reporting.

The NIFRS is additionally employed by NAVCOMPT to capture and generate individual activity monthly reports. These reports summarize data by Activity Groups which is used to prepare monthly execution reports for DoN/DoD/OSD, and for budget comparison performance evaluations between activities.

## NAVY INDUSTRIAL ACTIVITY GROUP STRUCTURE

<u>SYSCOM</u>	<u>#</u>	<u>Activity Group</u>
ONR	1	Navy Research Lab (NRL)
MSC	1	Military Sealift Command (MSC)
NAVSEA	8	Shipyards
NAVSEA	5	Ordnance Facilities
NAVSEA	7	Surface Warfare Centers
NAVSEA	2	Undersea Warfare Centers
NAVAIR	6	Naval Aviation Depots
NAVAIR	7	Air Warfare Centers
NAVFAC	9	Public Works Centers (PWC)
NAVFAC	1	Construction Engineering Lab
NAVSUP	1	Printing Service (NPPS)
SPAWARS	1	Navy Research Center
NCTC	1	Regional Data Automation Centers
MARINE CORPS	<u>2</u>	Logistic Bases
<b>Total:</b>	<b>52</b>	

**FIGURE H-2**

## V. LESSON II: THE INDUSTRIAL ACCOUNTING SYSTEM

### A. FINANCIAL STATEMENTS

Industrial activity budgets and execution reports contain statistics from and follow formats consistent with standard balance sheets and income statements. Observation of these basic formats provides a broad insight into the industrial budgeting and accounting structure. A simplified balance sheet format is presented below in Figure H-3.

<u>TYPICAL BALANCE SHEET</u>	
<u>Assets</u>	<u>Liabilities</u>
Cash	Accounts Payable
Accounts Receivable	Accrued Expenses
Work-in-Process	Advances from
Material Inventory	Customers
Prepaid Expenses	
Equipment/Land	
	<u>Capital</u>
	Donated Assets
	Reserves
	Accumulated
	Operating
	Results
	Net Principal

FIGURE H-3

The major operating asset of an industrial activity is the Work-in-progress account (which represents the temporary

investment of resources and associated costs for customer requested work which as of yet is unbilled) as well as, material inventory. Additionally, the activity carries the normal asset accounts such as accounts receivable, material inventory, prepaid expenses, and fixed assets (equipment, buildings and land). [Ref. 1: p. 1-31]

The major liabilities of an industrial activity are quite similar to those of any other business: accounts payable and accrued expenses. The accrued expenses are worthy of some additional emphasis. The principle accrued expenses are for wages owed, leave due to employees, and others (resulting from contractual relationships with commercial vendors). Monthly charges in the personnel-related accrued expenses have an interesting impact on DBOF cash. Since civilian government employees are paid on a bi-weekly basis and there are 52 weeks in the year, there are normally two three-payday months each year. Since the cost of labor for industrial activities alone is close to \$100 million per week, the cash outflow experienced in a three-payday month can be \$200 million greater than normal, significantly reducing cash available. During the remaining two-payday months, a cash outflow for labor tends to be less than that of accrued costs which replenishes the accrued expense account until the next three-payday month. [Ref. 3: p. 9]

Furthermore, most personnel tend to take leave during the summer and Christmas holiday months. As a consequence, the

accrued expense for leave tends to increase in off-periods and to decrease during heavy leave periods. This change has a more subtle impact on cash: a surge in leave taken tends to reduce "billable" inputs for current work-in-process (since less work is actually being accomplished) and a month later results in a decline in billing collections which decreases cash inflow.

The advances from customers' account represents deposits from customers for future work to be accomplished. Advances are required from all foreign governments and private party customers. The Reserve account represents funds collected and ear-marked for capital or major expenditures. These dollar amounts are usually obligated, but their payments do not effect current operating costs. In a typical business, the accumulated operating results account, Retained Earnings, records the net profit or loss of the activity from its inception. Contrarily, since the objective of a DBOF activity is to break even each year, the retained earnings account objective posts as a zero balance in the President's budget year.

The income statement utilized by an industrial activity can be viewed as having three main sections (revenue, costs and operating results) as shown in Figure H-4. Revenue is recognized by two basic methods: recognition based upon project completion (as demonstrated by the final billing of a

customer order) or revenue based upon progress of work on the customer order.

STATEMENT OF REVENUE AND COSTS

Revenue

Described and totalled by type

Costs

Direct Costs

Production Expense

General and Administrative Expense

(Each type cost detailed by: labor, materials, other contractual services, depreciation expenses and transfers)

Total Costs Incurred For Period

Adjustments To Costs (detailed)

Net Operating Results

FIGURE H-4

B. COSTS OF AN INDUSTRIAL ACTIVITY

Industrial activity financial reports tend to categorize costs either by their origin (labor, material, etc.) or their application (direct or indirect). The majority of costs are categorized as direct. Direct costs are those borne in direct support of a specific customer order. The largest cost for the activity is labor.

While the subject of costs within an industrial activity would seem to be relatively uncomplex, the reader should be

aware that this is not usually the case. For example, differences between costs incurred, total costs and/or full costs are often a matter of interpretation and don't always reflect all the costs to an activity. Accordingly, the following discussion presents a view into the types of costs attributed to the activity but not currently paid for by the activity or its customers:

**1. Costs generally not borne by the Industrial Fund (IF)**

In the civilian personnel arena, some costs of the civilian retirement program are not directly borne by the activity. The costs of major investment items in support of the activity (most buildings) are borne directly by military construction-procurement appropriations and "donated" to the activity. With DBOF and unit-costing concepts, these types of cost anomalies are major target areas for revision.

**2. Costs borne by the activity but not charged against customer orders**

In certain instances, the mission of an activity includes functions which are not directly related to the industrial process in support of its customers. Functions such as maintenance of test ranges have been included in the mission of the activity for management control but are financed by the activity's parent command from appropriated funds (normally the Activity Group Commander) rather than the activity customers. Once again, DBOF and unit-costing concepts are directed at accounting for such anomalies.

As previously noted, labor is the largest budgeted cost for an industrial activity. The industrial activities are the single largest financing vehicle for civilian personnel. Approximately 50% of all DoN civilian personnel are employed by industrial activities. Over the course of the last decade, the Navy has pursued a policy of centralizing its facilities into concentrated geographic areas and incorporating, to the greatest extent possible, additional like business functions into existing industrial activities. Consequently, the workload has grown. [Ref. 3: p. 13]

### C. COST ACCOUNTING

The accounting system employed by industrial activities feature double-entry accrual accounting, internal control over all transactions, and integration of cost accounting records with the general ledger accounts. The specific details are spelled out in the NAVCOMPT Manual, Volume 5.

There are internal financial controls at all industrial activities. One purpose of these controls is to preclude costs from exceeding the amounts authorized on customer orders. Two major controls are the accounting and budgetary controls explained below:

- Accounting controls - to prove the accuracy and propriety of transactions and accounting records.
- Budgetary controls - which require that the financial plan and accumulation of actual data be on the same basis. [Ref. 1: p. 1-22]

When a reimbursable order is received by an activity, it is assigned a unique customer order number which is further broken down into job order(s), to which all work is charged. Costs are accumulated and customer billings are made on the basis of these customer orders. A collection schematic for job order costs under an IF is illustrated in Figure H-5. As can be seen, there are two types of costs: direct and indirect. An explanation of these costs follow:

**1. Direct costs**

These costs include labor, labor acceleration, material, contractual costs etc. Direct costs are charged directly to the specific job order as the work is performed.

**2. Indirect costs**

These costs include all other costs that are not directly associated with any specific job order yet are borne by all job orders. These costs include the following:

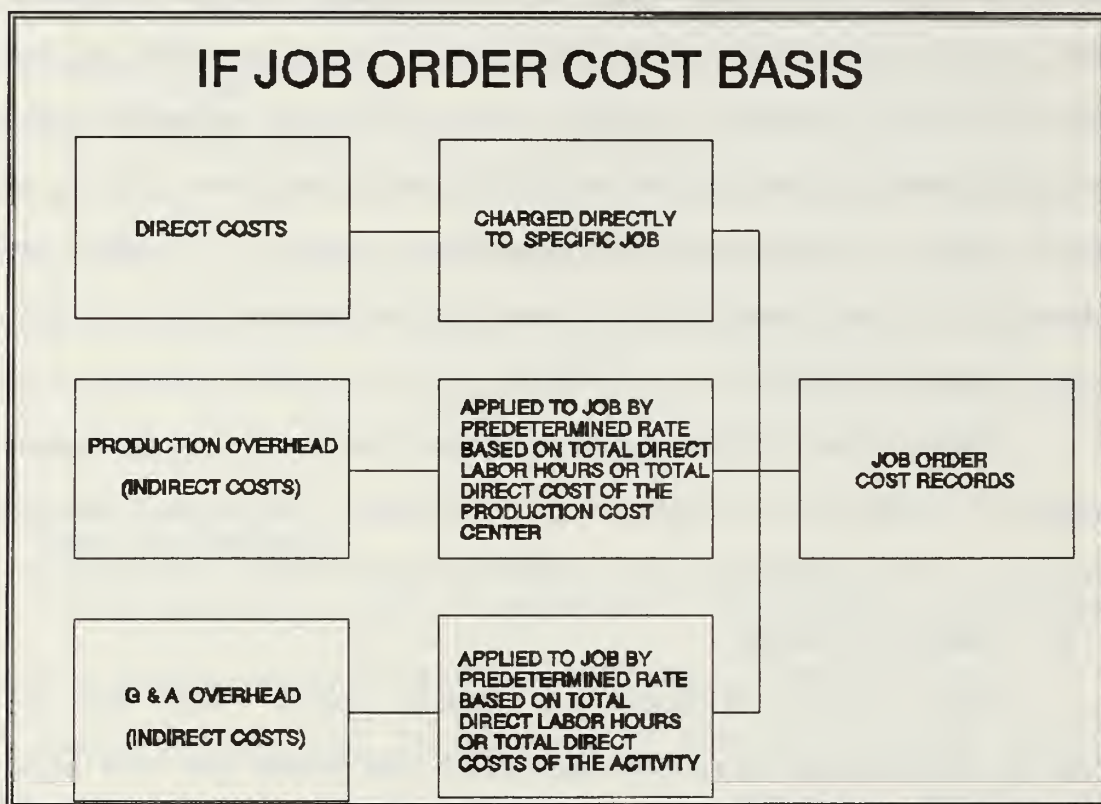
***a. Production Overhead Costs***

Production overhead costs typically include costs associated with supervision, contract administration, etc... and are distributed to each specific job order by use of a predetermined rate set by each production cost center.

***b. General and Administrative Overhead Costs***

General and administrative overhead costs include costs associated with headquarters management, comptroller office, civilian personnel office, etc... and are distributed to each specific job order by use of a predetermined rate

which is based on the budgeted output of the entire activity (all cost centers).



**FIGURE H-5**

The procedures for establishing predetermined overhead rates and their applications are discussed in the following paragraphs and are depicted in Figure H-6.

First, all production overhead costs for the cost center for an upcoming period are estimated and totaled. This total is then divided by the total budgeted direct labor hours (both civilian and military) that will be incurred by the cost center. The result is called the production overhead rate for the cost center. Similarly, general and administrative (G&A)

overhead costs are estimated and totaled for all cost centers within the activity. The total G&A overhead costs are then divided by the total number of budgeted direct labor hours programmed for all cost centers, which establishes the G&A overhead rate. For each cost center, the predetermined overhead rate is the sum of both the cost center production overhead rate and the G&A overhead rate.

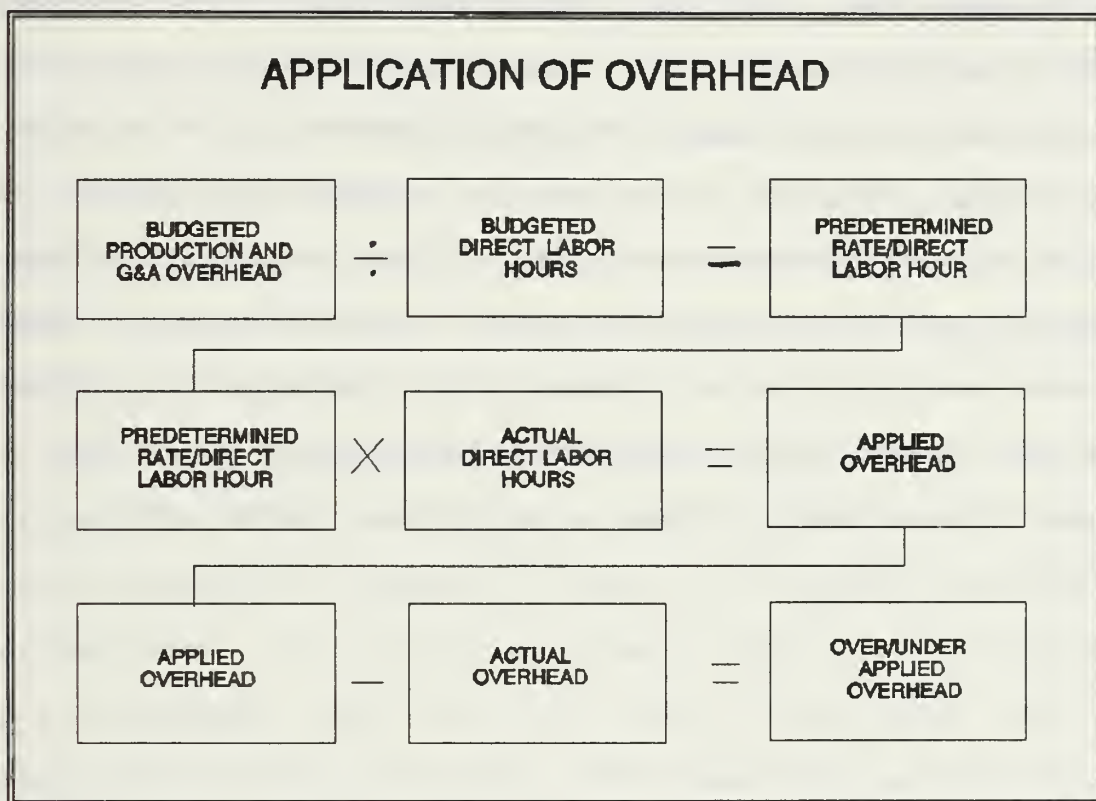


FIGURE H-6

The predetermined overhead rate is applied to each actual direct labor hour worked and is considered the applied overhead. Applied overhead is then compared against the actual overhead incurred. The difference between the applied

and the actual overhead is accumulated as an overhead variance. The overhead variance is used as a management tool for measuring cost center efficiency and contributes to the activity's profit or loss for an accounting period. These variances are scrutinized by management when re-computing the next period's predetermined overhead rates.

Based upon NAVCOMPT guidance, certain functional areas within industrial activities are considered service centers. These functional areas (such as data processing) internally serve other cost centers in the accomplishment of their tasks. The actual costs of these service centers are offset by charge-outs at predetermined rates. The actual costs of these service centers are likely to be at variance with those budgeted and distributed. Consequently, these service center cost variances can be viewed as contributing to the profit or loss of the activity during an accounting period. [Ref. 3: p. 16]

## VI. LESSON III: CHARGES AND RATE STABILIZATION

### A. CHARGES TO CUSTOMERS

Figure H-7 provides a schematic view of different approaches employed by the industrial activity in charging customers for work accomplished. There are two avenues of approach: cost reimbursable and fixed price. Both approaches are a means to recover costs incurred in support of a customer's order. Differences between these two avenues center around an activity's ability to adhere to previously budgeted estimates and the degree of risk it is willing to take to reduce costs. The two approaches are briefly described in the following paragraphs.

The cost reimbursable approach essentially involves accumulating direct and indirect costs in such a manner as to allow progressive charging of costs to a customer as work is accomplished. This charge is usually based on a stabilized (pre-determined) rate per unit (such as per hour) for all labor hours worked and actual costs incurred for such items like contracts and materials issued in support of a specific customer order. For certain work in support of non-Federal Government entities (such as local governments and foreign military sales) all the charges are calculated based on actual costs.

## INDUSTRIAL ACTIVITY CHARGES TO CUSTOMERS

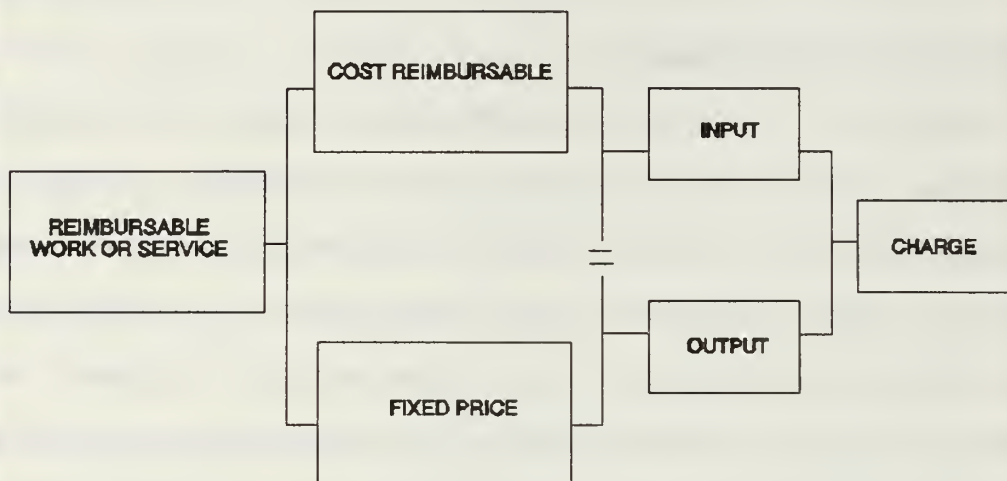


FIGURE H-7

The fixed price customer order approach involves an agreement between an activity and its customer to perform specific work for a specific fixed price. These customer orders normally evolve from negotiations between the customer and the activity. Ship overhauls at Naval Shipyards are typically handled in a fixed price approach.

Charges to customers by either approach can be viewed as having been either based on inputs to or outputs of the process. Inputs would include such factors as hours worked or materials consumed while outputs would include products or

services produced such as electricity furnished to a Public Works Center customer in kilowatt hours.

While output pricing seems to be in line with the method employed by a stock activity, it is worth noting that for industrial activities there is no national output pricing system. That is to say, the price charged for a standard productive process in a shipyard on the East Coast is not the same as would be charged on the West Coast because each of the fifty-two different industrial activities seek to recover their own costs independently.

Thus, given similar efficiencies for inputs and similar sizes for two activities, their charges to customers would tend to vary based upon the cost of inputs such as regional wage scales, regional raw material costs, and regional utility costs. This illustrates the classic difference between industrial and stock operations. Industrial activities are regional in their pricing while stock activities are generally national.

#### **B. RATE STABILIZATION - THE PRACTICE**

Under the rate stabilization concept, industrial activity rates charged for services are based upon the DBOF portion of the President's Budget. A principle objective of stabilized rates is to shelter DoD customers from wide variances due to cost escalation (inflation) against those budgeted thus

allowing the DoD and Navy to better manage planned execution of its "programs". [Ref. 3: p. 13]

## **C. RATE STABILIZATION - THE PROBLEMS**

### **1. When Will We Know What the Rates are?**

Individual activities construct their budget submissions during early spring and submit these budgets, together with proposed rates to their Activity Group Commanders at that time. The budgets are reviewed and adjusted by the Activity Group managers during May/June and submitted to DoD in September. DoD reviews these budgets and makes adjustments right up to the end of December at which point they are incorporated into the President's Budget for submission to Congress in January.

Original rates proposed by the activities (during the April timeframe) have to be modified to incorporate changes made by Activity Group managers, NAVCOMPT and DoD. This update is normally accomplished in early spring of the following year. Consequently, stabilized rates don't get announced to local customers until the period of April/May which hinders the budget planning process. Since Navy customer budgets are priced from the "bottom up", it is interesting to note that the DBOF rates (for the President's Budget fiscal year) are not available to industrial activity customers when the President's Budget is being prepared.

Rather they become available a year later, in time for the construction of the apportionment year column of the next year's President's Budget.

While NAVCOMPT tries quite hard to balance customer and industrial activity funding in the President's Budget, the process in reality is handled at a level much further beyond that of the local customer budget. The imbalances which inevitably occur come to light in the apportionment column of the next years's budget submission. In effect, although the program stabilizes rates almost two years ahead of time, stabilization for the local activity level customer happens a year later than needed to program its goals.

## **2. Should the Rates be Regional or National?**

Given that rates are stabilized, does it make sense that many different activities would have different stabilized rates for the same service? This situation currently exists for each activity within an Activity Group and for common services available from numerous groups. It exists because local activities build their rates based on local costs which vary regionally.

## **3. What Impact has Rate Stabilization had on the IF Activity Financial Structure?**

The essence of rate stabilization is that annual rates are set for the entire fiscal year. The combination of rate stabilization and activity budgeting has created a situation

wherein the rates ultimately charged reflect modifications by the Activity Group Commander, NAVCOMPT and OSD. As a consequence, individual activity commanders have lost the ability to directly determine or change stabilized rates once a flaw has been observed in execution. In point of fact, activities are told what factors to employ during budget construction and subsequently modify those rates prior to execution. [Ref: 3]

#### D. FOR DBOF ACTIVITY CUSTOMERS

1. It is important to understand revolving fund concepts in some detail, and to realize that as the customer, you must pay a proportion of all costs of an industrial activity's operations.

2. From a customer point of view, working with a DBOF activity is much like contracting with a commercial contractor. The only significant difference is that the DBOF activity is not out to make a profit for stockholders.

3. In dealing with DBOF activities, customers should be explicit as to just what work is to be performed and for what cost. This alleviates misunderstanding or disagreement about billings. Prices and/or estimated costs should be spelled out in advance.

4. A good working relationship with the DBOF activity is necessary to meet the challenges of the future. These challenges have economic origins and will become more demanding as DoD continues to streamline and consolidate internally to save dollars.

## VII. CONCLUSION

The primary goal of this thesis was to develop a comprehensive guide to industrial fund activities that would be incorporated as a training module in the Practical Comptrollership Course (PCC) and the Financial Management in the Armed Forces Course offered by the Naval Postgraduate School in Monterey, California.

Throughout the course of my research, it became readily apparent that much was changing in this field as a result of DoD consolidation efforts under DBOF and DoD emphasis on new business practices such as unit-costing. I have attempted to provide a broad overview of these changes with a more thorough discussion of areas of greatest concern facing the Comptroller today. Although it would be impossible to incorporate all relevant information in this guide, I feel it provides a basis for general understanding of industrial activity operations and serves as a ready reference for further discussion and research.

There is a tremendous wealth of knowledge and expertise in the field of industrial activity operations yet there is very little structured information on DBOF and unit-costing principles since they are relatively new DoD concepts. More formal DoD guidance on these concepts is expected in the near

future. Continued research for updating this module should be ongoing until full implementation of these concepts is complete which is currently projected to occur within the next three years. I would like to thank all those experts who shared their valuable time and knowledge with me during my research. There is little doubt that understanding industrial fund activity operations can assist the Comptroller in weighing valuable cost saving alternatives and will improve relations with such activities should they occur.

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